

the

CANNON

University of Toronto Engineering Society

Volume VI, No. 1



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the Department of Athletics and Recreation & the U of T. Alumni Association

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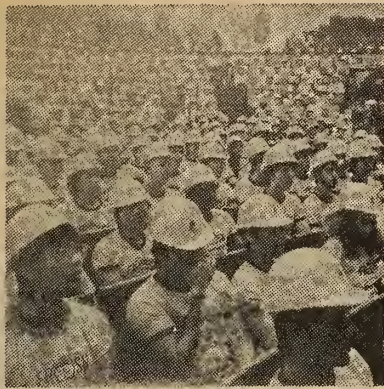
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Editor

Judith Vosko

Photography

Joe Chiang

Staff

Kathy Dumanski
 Don Grandy
 Bill Hollings
 Lee Scott
 Jeanette Southwood
 Mary Svazic



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SAE Club Revs into Action

Avid car buffs have entered fuel mileage competitions for the past three years. They will take another run at the title with a revamped model this year. page 5

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Whatever your technical interest, there is a professional club for you with activities throughout the year. page 8

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The five elected officers are responsible for the smooth operation of the entire Engineering Society. Read about their previous experience and plans for the future. page 14

Fighting Cystic Fibrosis

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Editor's Comments

It seems like just yesterday that we were welcoming the new green leaves as a sign of spring and now summer is over. But enough remorse, this Cannon is here to tell you what is in store for an exciting and enjoyable school year. (And you didn't think that was possible.)

If you are only going to participate in one extra-curricular activity this fall, make it Shinerama. This event is more than just fun since proceeds go to a good cause - the fight to cure cystic fibrosis. Not only that, a few hours of shining shoes can get you 3 free meals (hot breakfast, bag lunch, and barbeque supper) plus your entrance to a super pub afterward.

The Engineering Society, of which each and every undergraduate in the faculty is automatically a member, has a wide variety of activities planned to cater to all tastes. In this and every issue, refer to Eng Soc News for the details on the

events of that month. Just to see what it is all about, why not attend the Annual General Meeting on September 27 - you get a vote just for being a member. Don't miss the first employment seminar, Wednesday, September 28th, if you want summer or a full-time job! On the pub scene, there is the new Sid Smith Addition which is a long-awaited full-time pub for the University. Closer to home, the Sanford Fleming Cafeteria will be open for a couple of beers (or more) every Friday from 4 to 9 pm, September through April.

Whether or not you have any athletic skill whatsoever, there is a place for you in Engineering sports. From a very recreational co-ed level up to competitive play, there are numerous events for men and women. Drop by the Sports Pub in the Sanford Fleming Cafeteria tomorrow (Thursday) from 5 to 7 pm and talk to the commissioners of the sports

that interest you.

So, you say, that's fine, but I'm here to learn something! Why not apply that knowledge immediately and celebrate the Centennial of the Engineering Society by helping to design the fastest ever human powered vehicle. If you prefer cars, help is still needed in the project to get every last inch out of a gallon of gas (see page 5). Also featured in this issue are the many other student professional clubs covering a wide spectrum of engineering disciplines.

On a sadder note, we - as students, as engineers, as people - lost a dear friend this summer. Vince Volpe, the Engineering Society Vice-President Administration for 1982-83, died in a mountain-climbing accident. He was thoughtful, helpful and fun-loving. We would all be lucky to match Vince's enthusiasm and spirit. Make this your year to give it a try.

Letter to the Editor

I am writing in response to an article entitled "Lack of Support for OEDC" in the last issue (the Cannon, April '83). In this article the author complains about the lack of funding available for his design project. He is correct in pointing out what various social events were funded by the Engineering Alumni Association. He does not however mention the fact that the Association also paid \$2400 towards the cost of running the design competition the year before. This helped to pay the design costs for all the competitors. As he himself

points out, he only started looking "several weeks prior to the OEDC". I think that if the Alumni Association is to manage its funds responsibly it cannot be expected to come up with money on such short notice.

The Alumni Association has decided that in the future all funding requests from undergraduates should come through the Engineering Society. They should also be presented by the Society to the Alumni Association in April for the upcoming year. This procedure has been followed

this year and the Alumni Association announced many donations for the upcoming year. These included \$2000 for OEDC competitors, \$3,000 for Orientation, \$2,000 for Grad Ball, \$15,000 for a Career Seminar and \$1,000 for this newspaper.

I think that the Alumni Association take great care in managing the funds donated by the many generous Alumni of this faculty and we should all thank them for it.

Andrew Alberti
Vice-President Administration

Fuel Mileage Car Being Designed

High Tech Travel

Jeff Yuill
Vice Chairman
S.A.E. Club

Imagine being able to drive from Toronto to Vancouver on only 4 gallons of gas. An impossible feat you might think, but several engineering students in the Society of Automotive Engineering Club will make this feat a reality by the end of this year with the help of high technology.

The 1973 oil embargo forced the western industrialized world to take a hard look at how much fuel they were wasting. As the price of oil skyrocketed, the need to use it more efficiently became imperative. Transportation was one area where an incredible amount of fuel was being wasted. As an incentive to advance technology and to inform the public, organizations such as Shell Canada and the Society of Automotive Engineers (S.A.E.) annually sponsor competitions to find the vehicle with the best fuel mileage.

Although high mileage competitions have been around many years, the University of Toronto only entered these competitions three years ago when four engineering students designed a high mileage vehicle as a fourth year design project. The original vehicle had a lightweight welded aluminium frame, supported and steered by two bicycle wheels at the front and driven by one wheel at the back. The driver sat in a reclined position with a 49cc., 4 stroke motor mounted directed behind the driver. The body which covered the vehicle consisted of a lightweight balsa wood framework covered with plastic, to produce a shape with low aerodynamic drag.

Over the next two years the basic shape and configuration of the original vehicle did not change although extensive modifications to the motor and drive train did occur to increase efficiency and reliability. Last year proved to be the vehicle's best when a mileage of 531 m.p.g. was obtained at the S.A.E. Super-Mileage Competition in Michigan.

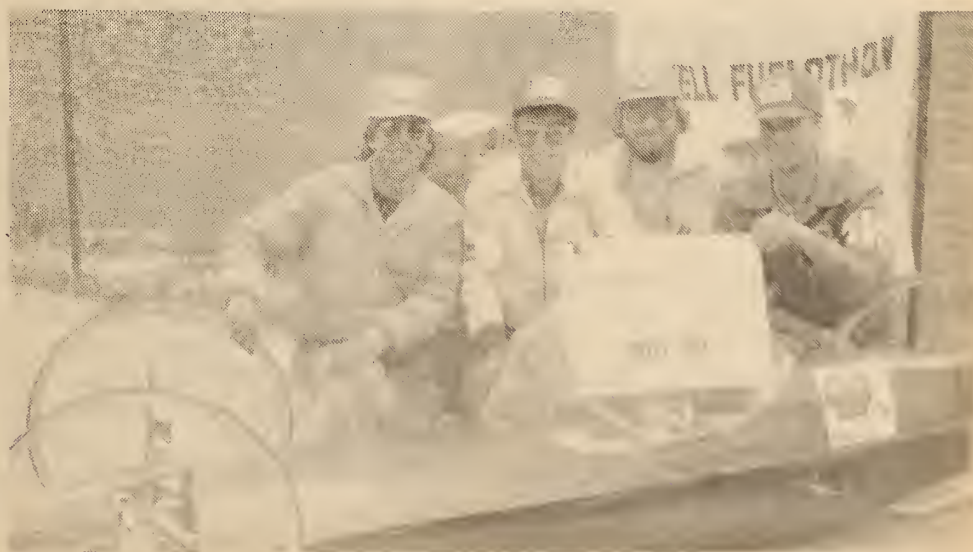
Due to the constant improvement of other vehicles and the poor reliability and repairability of some of the design features such as the balsa wood and plastic shell, it was decided to design and build a new vehicle. In order to minimize aerodynamic drag, rolling resistance and weight, and to maximize engine and drive train efficiency, many design features were considered. After a great deal of research and consultation with professors and graduate students, it quickly became evident what design features were the best.

In order to reduce aerodynamic drag, it was

decided to lay the driver in the prone position (on his stomach) to reduce the frontal area to 2.36 square ft., the lowest frontal area yet achieved in competitions. The top and side views of the 9 ft. long aerodynamic shell consist of two wing sections, the cross sections being elliptical. The rear wheel will have an aerodynamic fairing built over it while the two front wheels will have plastic film over the spokes. It was estimated that the new vehicle will have a coefficient of drag of 0.12 (normal cars have coefficients of drag up to 0.6) making the very 'slippery' aerodynamically.

To reduce the weight of the vehicle was one of the greatest challenges faced in the design. After considering many materials to support the weight of the driver, engine and vehicle, it was found the lowest weight was achieved with a graphite composite fibre monocoque body pan and a

continued on page 23



More High Tech Travel

'Humanpower' Needed

Julia Biedermann
Civ 8T5

What can a handful of U of T engineers accomplish in one summer?

When it comes to designing a human powered vehicle that will do 110 km/hr ... not much!

If you read the last issue of the Cannon (April '83), then you may know what this is all about. If not, read on! U of T's engineers are designing and building a human powered vehicle (hvp) with which we will attempt to shatter the present land record of 101.26 km/kr. If successful, this design is to commemorate the Engineering Society's Centennial in 1985. If unsuccessful, we just won't let the Varsity know.

Our rather small group of hvp enthusiasts has been meeting regularly throughout the summer. Mostly we just talked and got to know each other better but a few significant decisions have been made. For instance, we know we'll put humans in-

side a low, sleek shell and have them pedal like mad for about 1.5 km. Not too surprising! Well, it was a hot summer!

Accomplishments have been made, including the acquisition of free computer time, alumni support in the form of materials and expertise, and the Eng Sci department has mentioned they may give credits towards their design course for those who participate.

U of T is not the first to think about human powered vehicles that go fast. Each year since the 1970's HPV Speed Championships have been held in the U.S. The present record was set there by a team from General Dynamics in May 1980. Their entry, called the Vector, was an aerodynamic tricycle with two occupants sitting back to back. This is a popular design and one that many of you may be familiar with. Perhaps you saw the single driver version of the Vector on display at Bloor Cycle a couple years ago.

This project is bound to be a great technical challenge, a lot of fun, and a good thing to put

on your resume. Just think of the prestige of being on the design team of the *fastest* human powered vehicle!

We need students from all engineering disciplines from all years (Frosh included) to contribute their minds and bodies to this project. A special invitation goes out to Industrials for human factors, Aerospace for aerodynamics, and Chems for adhesives and fiber reinforced plastics.

Our next meeting will take place Monday, September 12th at 5 pm in the Metallurgy Common Room (WB143). Successive meetings will be held on the first available Monday of every month: same place, same time.

Please feel free to come just to listen in or to make any contributions. I'm sure it will prove interesting for you.

If you wish to know more about past attempts then pick up a copy of the last Cannon and read the article entitled "Engineers Wanted" by Gus Rinella.

Hope to see you on the 12th!

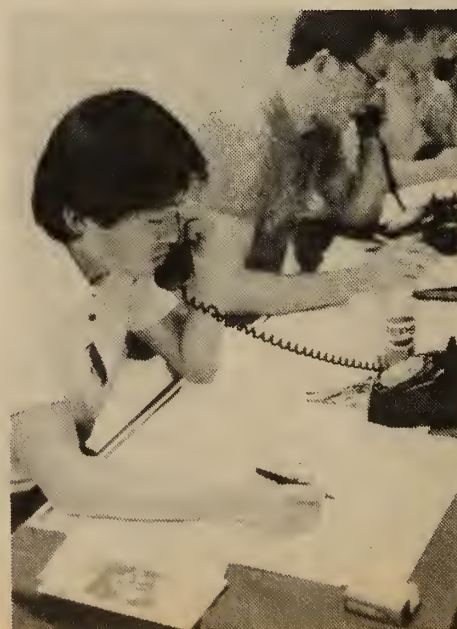
Dialing for Skule

Malcolm McGrath
Assistant to the Dean
Alumni Liason

This fall, during the weeks of October 3rd and 11th, the students, through their club chairmen, are being asked to assist in the annual Telethon to alumni.

On each of seven evenings, a different club will preside. The club that achieves the largest dollar value pledged will receive a \$100 prize from the Alumni Association.

It's great way of telling the Alumni about how you are helping Skule with the \$100 incidental fee, and urging them at least to match you in their giving. For those of you who plan a career in sales, it's great practice! The evenings begin at 6:00 p.m. with food and beer (free, of course) and calling takes place from 6:30 to 9:00 pm. It's a fun evening, but a productive one as well. Last year, over \$20,000 was pledged over four evenings. Let's double that in 1983. See you there!



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**THIS IS JUNE.
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ON ALL YOUR
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SUPPLIES**

Professionally Oriented Student Groups

Join the Club(s)

Don Grandy & Ed Grandy
Civ 8T4 Mech 8T4

By now you are probably sick of the thought of returning to school, but here we are again back for another challenging year. For a number of you, namely the 8T7 frosh (doesn't that sound like a long time away), this is the start of a new experience. For the rest of us it is just another stepping stone closer to that important degree. In either case this should be the time when you not only think about joining but do indeed join one or more of the professional organizations, if you haven't already done so.

Being an engineering student of the University of Toronto you have a number of professional organizations literally at your fingertips through the various professional clubs. Although


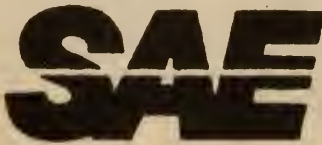
the majority of the students who do join are in their third and fourth years, second year students and especially first year students will not be refused.

These professional clubs offer student membership into professional organizations for a very reasonable fee. These clubs also offer entertaining events, such as smokers, occasionally with a technical theme. As student members you may also purchase handbooks and other publications at reduced prices. A student membership therefore allows the student member opportunities and privileges equal to that of a professional member but at a greatly reduced price.

Upon graduating you are expected to become members of professional organizations or societies. This will enable you to stay abreast of the technological developments

and advancements that are made in equipment, test procedures, materials, design techniques and standards. Membership dues that are paid at this point are considerably higher than student membership dues. Therefore, why not use your undergraduate years as an opportunity to experiment with the different organizations and societies to find one that is best suited for you and the one that you are best suited for.

The accompanying table summarizes the majority of the professional clubs that exist in the faculty of Applied Science and Engineering at the University of Toronto. This list is by no means complete, thus if there are any professional clubs that have been overlooked, please forward the information (similar to that listed) to the Engineering Society Communications Office (SF B670).

CREST	GENERAL INFORMATION	ACTIVITIES
	<p>IEEE Student Branch Club</p> <p>Institute of Electrical and Electronic Engineers</p> <p>Contact: Steve Sam 489-5766 or Professor Leon-Garcia 978-5037</p>	<p>Past: smokers</p>
	<p>UTSAE Club</p> <p>Society of Automotive Engineers Inc.</p> <p>Contact: Jack Chappell 767-4444 or Dr. J. Wallace 978-3043</p>	<p>Past: smokers with guest speakers from the transportation industry, prepared and competed a high mileage car in the Shell Fuelathon and the Super Mileage Competition</p> <p>Proposed: smokers, design and build a new entry for the two mileage competitions</p>

CREST	GENERAL INFORMATION	ACTIVITIES
	<p>SPE, U of T Chapter</p> <p>Society of Plastics Engineers</p> <p>Contact: Rimas Cipiljauskas 247-0578 or Professor R.T. Woodhams 978-6278</p>	<p>Past: plant trips, social gatherings, student members are encouraged to attend monthly SPE local section meetings</p> <p>Proposed: as above, student conference</p>
	<p>ASHRAE Club</p> <p>American Society of Heating, Refrigerating and Air Conditioning Engineers</p> <p>Contact: Carolyn Fraser 221-5204 or Dr. Abdelmessih 978-3046</p>	<p>Past: smokers, dinner in March</p> <p>Proposed: smokers, dinner, opportunities to attend conferences</p>
 	<p>ASME/CSME Club</p> <p>a) American Society for Mechanical Engineers b) Canadian Society for Mechanical Engineers</p> <p>Contact: Mary Stewart 537-0147 or Dr. Rimrot 978-3053</p>	<p>Past: guest speaker at a smoker, CAD/CAM slide presentation given by a representative from SPAR Aerospace</p>
	<p>UTCSCCE Club</p> <p>Canadian Society for Civil Engineering</p> <p>Contact: Jack Nirenberg 536-2255 or Professor A.M. Crawford 978-3115</p>	<p>Past: UTCSCCE Club officially begins operation in the 1983-84 school year</p> <p>Proposed: Career Night, exchange trips, CSCE Night, smokers, career excursions, model bridge building contest</p>
<p>CSEE C G E</p>	<p>CSEE Club</p> <p>Canadian Society for Electrical Engineers</p> <p>Contact: Professor S.D.T. Robertson 978-5294</p>	<p>Past: smokers</p>
	<p>CSIE Club</p> <p>Canadian Society for Industrial Engineering</p> <p>Contact: Steve Rosen 782-4661 or Professor Turksen 978-6421</p>	<p>Past: engineer for a day (site visits), lunch hour speakers, Big brother/sister advisory service for frosh</p> <p>Proposed: as above, student conference in February</p>
 	<p>MMS Club</p> <p>a) American Society for Metals b) Canadian Institute of Mining and Metallurgy</p> <p>Contact: Hans Schade 842-1423 a) Professor W.A. Miller 978-3012 b) Professor R.T. McAndrew 978-3012</p>	<p>Past: ANNUAL Student Essay Competition, smoker with free beer and pizza in the spring term</p> <p>Proposed: as above</p>

Yellow Fever Hits Campus

Orientation: What's Next?

Bruce Christie
Vice-President Activities

Congratulations Frosh! You've just passed the most crucial test of your lives - you've managed to arrive at school the morning after DJ's. How do you feel? Does your head hurt? AArree yyooou sseeliinnngg ddoouubbllee?? Now you know how much fun engineering can be. Be warned: the worst thing you could do now is to make a habit of skipping classes. No matter how smart you are, skipping usually leads to failing and that is why we've planned the orientation events around your classes. On the other hand, spending all of your spare time studying can be just as disastrous.

Things get rolling (no pun intended) today at noon when the engineering frosh get together on front campus for a moonball game. Even if you don't like sports, think of this as an opportunity to get hot and sweaty with some members of the opposite sex!

As soon as school gets out, we're getting together in the parkette behind the Old Metro Library for a tug of war, human pyramid building and some practice in water balloon throwing (just in case the need for this skill should arise later in the week.)

These activities will be starting at 3 pm followed by the pre-Scavenger Hunt barbeque at 5 pm with unlimited supplies of food and drink. Then comes the moment the city of Toronto fears most, when we turn you loose to gather up all kinds of neat stuff in the Nth annual Scavenger Hunt. There are

going to be just slightly less than a million prizes and everyone who comes out will get something. The BNAD team always seems to win (and always gets disqualified.) The Scavenger Hunt will give you an opportunity to find out all about the campus and could even send you as far as Buffalo for all sorts of paraphernalia. Just remember the basic rules of the hunt:

- 1) Don't steal anything
- 2) Don't break anything that you steal
- 3) Don't bring back anything that you break.

Let common sense prevail (ie. don't steal streetcars or police cars) and we can all have a great time.

Orientation activities resume Thursday at noon after you suffer through another morning of classes. Eat fast, then meet at 12:10pm in the Sandford Fleming lobby so we can all head over to Cody Hall for the Nursing Caper. After an hour or so it's on to St. George St. for the Nth annual Toilet Bowl Game which is not to be missed.

Thursday afternoon from 4 to 5pm is the English Proficiency Test...good luck! As soon as you escape from the test, run to the SPORTS PUB in the Sandford Fleming cafeteria where you will be able to meet all the people who run athletics for Engineering. This is your chance to ask questions and sign up for fall sports (not to mention down a few cold ones.)

Thursday evening is probably the most fun of all; in fact, it



Ever tried to move the moon?



A spirited group sing Godiva

will be so good that I can't even tell you about it. (Hint: It's called Cloak and Dagger night.)

If you're up too late on Cloak and Dagger night and you want some rest, don't miss the 3rd annual Shinerama Bed Race on Friday at noon. This is your chance to generate publicity for the Cystic Fibrosis fundraiser as you pull or cheer for your club's entry. (Rumour has it that the Nurses and lowly Foresters may try to dethrone the mighty teams from Skule, so come on out and support your team.)

Every Friday throughout the year, there will be a pub from 4 to 9 pm in the Sandford Fleming cafeteria. Guess what it's called: The Sandford Fleming Pub. Pretty boring, eh? That's why we want you to come up with a new name. Submit ideas in a sealed envelope to Ella in the Engineering Society by 4 pm on Wed., September 14. At this

Friday's pub, you can meet the chairmen of the Engineering Society committees and find out how you can get involved. You might even meet that mysterious enigma that doesn't exist, never has existed and never will exist - the BFC.

Don't drink too much at this pub though, save the heavy drinking for the SAC Roamaround Pub. (The engineers are running the pub at Wetmore Hall in New College.) This is one of the year's best pubs (actually it's a campus-wide pub crawl) and features a live band at every site. Get your tickets early from SAC or the Engineering Society because it's usually sold out by Thursday.

After you've recovered from Friday night's hangover comes your chance to do something for a good cause. Every frosh is to meet in the Sandford Fleming Atrium by 9 am where

shoe shine kits will be distributed for Shinerama. We'll all have breakfast and then, with the world famous Lady Godiva Memorial Band leading the way, we'll head out all over Metro Toronto to raise money for Cystic Fibrosis. There will be another free barbeque for all those attending with a Shinerama Pub to follow.

When you come down to Skule on Saturday, plan to stay down for the great Skule Sleepover. We'll see a few movies, drink some pop and brew and when we wake up bright and early on Sunday we'll be all set for the trip to Hart House Farm.

Hart House Farm is a spacious resort on the Bruce Trail and there are many activities planned for the day including a barbeque and a few surprises.

Have a great week because you're a HELL-OF-A-HELL-OF-AN-ENGINEER.

Eng Soc News

News from SAC

Although this might come as a shock to some of you, this summer has been a very busy one at SAC. Aside from doing everyday management jobs, hiring staff and planning for the coming year, a lot of time was devoted to establishing U of T's one and only full-time pub, at the new Sid Smith Addition. Functioning as a cafeteria during the day, it turns into a pub at about 7pm. But if you like you can get wine and beer there in the afternoon, especially after one of those impossible midterms or labs that never work out. It's open at this very moment, so go in and check it out - it's not just meant for artsies.

If you are interested in student problems and want to know why U of T and many other universities opted out of CFS this year, you might want to get involved in the big conference which SAC is hosting at the beginning of November. Help the SAC External Commission set it up or just sit in on some of the meetings! Look for more details in the next issue.

This year's SAC handbook will be distributed during orientation week. Get a copy and see what SAC has to say and to offer you as well as how you can get your money's worth during the year.

Finally, for those of you who are new here (you can't hide that yellow frosh t-shirt) or were too busy last spring to find out, the six people representing you, the engineers, at SAC are: Marla Drangova (Eng Sci 8T4), Tony Kasper (MMS 8T6), Martin

Kuntze (Mech 8T4), Paul Mang (Mech 8T5), Peter Miller (Eng Sci 8T4) and Marc Seeman (Ind 8T4). If you have any questions or want to get more involved drop us a note in the SAC mailbox in the Engineering Society. Also look for this column in each issue of the Cannon - we want to keep you informed on university happenings and hope that you will get involved. See you at the Roamaround on Friday (September 9), SAC's first big event of the year.

Maria Drangova
SAC Rep.

Sexual Harassment Counsellors Appointed

In response to several complaints from students who are no longer at the faculty, last year's Engineering Society President, Wayne Levin, started a campaign towards a policy for sexual harassment and discrimination. Several meetings during last year and over the summer have resulted in a preliminary policy.

A series of counsellors have been appointed. Any student who feels that he or she has been subject to any form of sexual harassment or discrimination should consult with one of these counsellors (a list of the counsellors follows). The Counsellors will help the student deal with the problem and will advise the student as to what actions he or she should take.

This policy is still in the preliminary stage since it still has to be approved by both the Executive Committee of

Faculty Council and Faculty Council in October. The counsellors have however already been appointed. They were appointed by the Dean and the Department chairmen in consultation with the Engineering Society and the Club Chairmen.

For further information please consult with one of the counsellors or ask at the Engineering Society.

Civil	Prof. G.N. Steuart Jean Barwell
Geo	Prof. F.A. Delory
Mech	Mrs. Donna Dawson
Ind	Prof. S.H. Cohn
Eng Sci	To Be Announced
Chem	Prof. M. Jane Phillips Mr. W.J. Dowkes, Alternate
Elec	Mr. M.D. McKinlay
MMS	Prof. U.M. Franklin
Faculty	Mrs. Sally Cumming Ms. Sandra Leith Dean P.M. Wright

Andrew Alberti
Vice-President Administration

Jobs, Jobs, Jobs

Another marvelous school year is just beginning and everyone is overanxious to crack open those textbooks and start studying for those midterms that will be upon us before we can turn around. But wait! Before you get too involved in those pages of numerical methods, think about your future. (Are you thinking?) What are you going to do next summer? Or, when you graduate? You probably hope to have an 'engineering' job. But, times are tough right now. No one is going to come running after you saying, "Take my job

offer, please." Look around your class. It is a group of people all trying to find the same job that you want to find. It's not easy.

But, you say, no one will hire me if I don't get good marks, so I should spend all my time studying. Not true! Also remember that no one will hire you if you don't apply. It is true, looking for a job is time-consuming. How do you utilize the resources available to you? What is wrong with the job market and what can you do about it? How do you know exactly which facet of engineering you would really enjoy? All very important problems. In an attempt to answer some of these questions, your employment committee planning to hold various conferences and seminars throughout the year to

enlighten you about the job market as well as what you have to look forward to with engineering as a profession.

The first conference is tentatively scheduled for late September. Its success depends upon many things, including speakers from industry and government plus student involvement in the project. The seminars will be more useful to some people than others, but no one can ask your questions for you. Speakers have a wealth of information and are just waiting to be tapped. Close your books and take the time to check out what the employment committee has to offer. Time is worth spending when you are planning for your future.

Lynette Fairweather
Employment Chairman

Name That Pub

Sandford Fleming Pub - now that's a boring name if there ever was one. Everyone loves the idea; a weekly pub (from 4 to 9 pm every Friday in the Sandford Fleming Cafeteria) giving students a chance to relax with a cold beer after a hard week.

The two pub managers, Peter Watler and Dave Wilson, figure if everyone loves the idea, someone must have a better name for the pub, so they're holding a contest. Entries should be submitted to Ella in the Engineering Society by 4 pm on Wed., Sept. 14. The winner will be announced at the pub on September 16 which is also a chance to view all the frosh artwork as they proudly display their newly decorated hardhats.

Dates to Remember

Thurs., Sept. 8 : *SPORTS PUB — SF Cafeteria at 5 pm*

Fri., Sept. 9: *Bed Race at 12 noon*

Roamaround Pub at 8 pm

(Engineering Site at Wetmore Hall)

Sat., Sept. 10: *Shinerama*

Mon., Sept. 12: *HPV Design Meeting*

Tues., Sept. 13: *Eng Soc Executive Meeting*

Fri., Sept. 16: *SF Pub including Hardhat Competition*

**Tues., Sept. 27: *Annual General Meeting followed by
Full Council Meeting***

Wed., Sept. 28: *Employment Seminar*

More Eng Soc News on page 21

Your Elected Executive

Jeanette Southwood
Chem 8T5

A quarter of a million dollars and almost all Engineering events (among other things) are under the control of the following five students: the Engineering Society executive officers. Their plans will affect the quality of your time spent in Engineering. Every student should feel free to approach them with ideas and questions and, so that you can recognize them, here is a brief introduction.

Ron McKenzie President

Ron McKenzie, Eng Soc president, possesses a comprehensive strategy for adapting the Engineering Society to the changing academic and industrial environments. Ron believes that extracurricular activities, such as those organized by Eng Soc not only enhance university education but also are, in fact, the second half of Engineering training. Af-



Ron McKenzie

ter extensive research, Ron has concluded that today's employers are gradually adopting the team-oriented approach in industry. Engineers working as a group can increase efficiency and, consequently, can provide an advantage over the competition. However, productive interaction between individuals requires well-developed communication skills, which, Ron maintains, may be acquired through participation in Eng Soc.

But Ron's vision for the Engineering Society goes further. During the summer, he learned that, although U of T's Engineering Faculty is considered to be number one in Canada, statistics regarding the employment of U of T's graduating engineering students do not mirror this admirable achievement. Ron wants Eng Soc to provide the public relations necessary to demonstrate to employers that a graduating engineer from U of T will be an asset to any company and to show engineering students that enthusiastic participation in Eng Soc is not only enjoyable, it is also valuable. Ron hopes that this approach will increase employment opportunities for the future.

As president, Ron's official job is to coordinate the efforts of the members of Eng Soc. He is a member of the Council of Presidents at U of T (COPOUT), and of the Faculty Council. In the coming year, Ron will deal with problems facing the Engineering Society from within and from without with an open door policy. "Eng Soc is not a clique," Ron says.

His achievements are impressive. While participating in Orientation, Professional Development and High School

Liaison events and acting in Skule Nite he also was a Faculty Council representative and a member of the rugby and broom ball teams. This year, as president, Ron's message is, obviously, "Get Involved!"

Andrew Alberti Vice-President Administration

Andrew Alberti handles a budget of a quarter of a million dollars for the Engineering Stores this year as one of his duties as Eng Soc vice-president administration. He is responsible for the financial and business affairs of the society and, with the Treasurer, prepares the Society's operating budget. While a voting member of all committees of Council, Andrew must keep the constitution up to date and assume the President's responsibilities in his absence.

Andrew's goals encompass many aspects of extracurricular involvement. He wishes to keep the Society's financial and administrative affairs in order so that they do not detract from other activities. In co-operation with Bruce Christie, Andrew would like to involve as many people as possible in the Standing and Special committees of the Engineering Society. Andrew intends to ensure that Engineering is well-represented across the campus, particularly at SAC and on Faculty Council as well as to the alumni.

Andrew's diverse experience includes a year as 1982-83 Eng Soc treasurer, two years on the Society's executive committee, one year on the Faculty Council Executive Committee, one year as a Faculty Council rep, one and a half years as a SAC director and one term as chair-

man of the SAC Elections Committee. This year, in addition to his Eng Soc responsibilities, Andrew will be executive vice-president of the Delta Tau Delta fraternity.

Andrew advises students that at a university as large as U of T, the best way to take advantage of the campus is to find an interesting group and get involved.

Bruce Christie Vice-President Activities

When Bruce Christie became vice-president activities, he immediately demonstrated his interest in the opinions of engineering students by distributing 800 questionnaires. Although only 300 were returned to him, he is using the results while formulating the activity schedule for 1983-84. Bruce reports that more class vs. class competitions were desired as well as a ski trip during Reading Week, a trip/party to Niagara Falls and Buffalo, and a basketball tournament.

As vice-president activities, Bruce oversees all cultural, technical, educational, athletic and social activities of the Society. He coordinates the work of the Standing and Special Committees of Council and the affiliates (the E.A.A. and course clubs). Bruce hopes



L. to R. Andrew Alberti, Alla Linetsky, Greg Dow.

to encourage more direct communication with students.

Participation on the Communications and Blue and Gold committees, the BFC and class volleyball and hockey teams have familiarized Bruce with Eng Soc. Last year, as Social Committee Chairman, Bruce ran Oktoberfest, the Common Room Marathon and the Cannonball, among other things. This year, Bruce wants students to realize that, whether they have been elected or not, all are welcome to participate in Eng Soc events.

Greg Dow Treasurer

Described as an "outstanding BFC member", Greg Dow acquired his position of treasurer during the final months of his first year. This was in keeping with the general enthusiasm he displayed as a frosh. A member of the rugby team and a first year rep for the Mech Club, Greg participated in BFC capers, Godiva Week, Homecoming and the Chariot Race. This year, he will also be a drummer with the BNAD.

As treasurer, Greg is responsible for the financial records of the Society and for submitting the Society's books for

audit at the end of the fiscal year. Although his role is strictly defined by the constitution, Greg hopes to learn as much as possible about the Society through his involvement in Eng Soc events.

Alla Linetsky Secretary

Alla (without an 'h') Linetsky believes that serving on Eng Soc provides each member of the executive with good experience within an informal corporate structure. While her official duties as secretary include the maintenance of Eng Soc records such as the minutes of the executive and council meetings, Alla intends to take on extra projects as well as improve liaison between Eng Soc and engineering students.

In the past, Alla has shown great interest and involvement in Eng Soc activities. During the previous two years, she has joined the women's basketball team, the LGMB, Skule Nite, Shinerama, the Blue and Gold Committee, the Orientation Committee and the Women's Committee. Alla's knowledge of Eng Soc makes her an ideal person to approach for information on any event.



Bruce Christie

A Week of Fighting Cystic Fibrosis

Shine On Fundraisers

Maria Drangova
Eng Sci 8T4

Every year, for the past 15 years or so, a few engineers have tried to keep up a tradition and do something useful during orientation. You might think the words engineers, useful and orientation don't go together, but, if you do, you've been ignoring a major event.

It's called Shinerama and it's FUN. Where does useful come in? We collect money in aid of Cystic Fibrosis, a disease that is becoming more and more pertinent to people in our age group.

A few years ago CF patients didn't live long enough to reach university but now through improved treatment and medication they live well into their twenties, some even longer. There might even be a person with CF in your class. Getting depressed? Don't! CF patients know what to expect and are making the most of their lives, enjoying every second. What you can do is give them a few more seconds, a few more years to enjoy.

Most of you upperclassmen probably didn't come out in your first year and have never thought of doing it since. But who said Shinerama is for frosh only? We need every body we can get! (And that doesn't mean frosh are exempted from Shinerama, it's the one orientation event that's a must.) Especially this year, when we have persuaded some artsies to come out and shine shoes. Let's show them that engineers can do more than study and drink beer. (Not saying that there won't be any beer that is.)

So, come out on Saturday

morning, with or without a hangover from Roamaround, and have some breakfast on us. (We'll meet in the Sandford Fleming Building Atrium at 9am.) Then we'll take you to locations throughout the city and let you collect money any way you can. Use your imagination; most Torontonians like spirited students and will be generous in their donations. We'll bring you lunch and later on in the afternoon when you return laden with donations there will be a barbeque where prizes will be given out as well as food and drink. Then, to top it all off, we'll go and celebrate at the

Shinerama Pub and if we can count fast enough we will announce how many millions have been collected. (Well, thousands are what we expect but miracles have been known to happen.)

Now that you know all about it, leave your homework for a day, do your good deed for the year and have some fun. Look for details below and on our posters and don't forget about our promotional Bed Race on Friday, September 9 at lunch.

Don't look for excuses, just bring your friends, have some fun, and don't forget to KEEP ON SHINING!

Paul V. Godfrey, B.A.Sc., P. Eng.
Metropolitan Chairman



City Hall, 2nd Floor
Toronto, Ontario M5H 2N1
Tel: (416) 947-8001 Telex: 06-23472

PROCLAMATION

SHINERAMA WEEK

SEPTEMBER 5 TO 10, 1983

Cystic Fibrosis is second only to cancer as a child-killer in Canada. This hereditary disease, which affects primarily the lungs and digestive system, has no known cause or cure and drastically affects the life of the sufferer through the need for rigorous therapy programs every day just to stay alive.

Over the past 20 years, much has been done to improve the life of Cystic Fibrosis patients. In this time, the median age of survival of CF sufferers has increased from under age four to over 20, due to new drugs and treatment, and within the last five years the average number of pills that CF victims must take each day has decreased from 100 to 20.

In spite of these gains, there remains much that needs to be done: the implementation of reliable testing to detect carriers of the CF gene and to detect the presence of CF in unborn children, the discovery of how and why CF-related lung problems start; and the need to create better forms of treatment which will prolong life. Most important of all is the constant research to find a cure for Cystic Fibrosis.

During the week of September 5 to 10, university students will be taking part in a Metro-wide fund-raising drive to help finance the research that is so necessary to halt this disease. Among the activities planned for this week are the 9th Annual Bed Race as well as the traditional shoe-shining stands and collection boxes in many shopping malls.

Therefore, on behalf of the Metropolitan Toronto Council, I am pleased to proclaim the week of September 5 to 10, 1983 "Shinerama Week" and urge all citizens to participate in and contribute to the battle against Cystic Fibrosis.

Paul V. Godfrey
Chairman
Metropolitan Toronto Council



A great way to meet nice people

Schedule of Events

Friday, Sept. 9

12:00 noon — Bed Race on University Ave.

Saturday, Sept. 10



9:00 am — Breakfast in SF Atrium

10:00 am — Shining

5:00 pm — Barbeque

8:00 pm — Pub in the new Sid Smith Addition

Financial Statements

AUDITOR'S REPORT

To the members of the
University of Toronto Engineering Society

I have examined the balance sheet of the University of Toronto Engineering Society as at February 28, 1983 and the statements of income, accumulated surplus and store section operations for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances, except as explained in the following paragraph.

Activities, expenses and revenues of some committee programmes are not fully documented in the regular accounts of the Society and as a result, I was unable to completely verify these accounts.

In my opinion, except for the effect of any adjustments which might have been required had I been able to adequately verify the items referred to above, these financial statements present fairly the financial position of the Society as at February 28, 1983 and the results of its operations for the year then ended in accordance with accounting principles generally accepted for non-profit organizations applied on a basis consistent with that of the preceding eleven month period.

The February 28, 1982 financial statements, and the related comparative figures included herein, were reported on by other auditors.

March 16, 1983
Toronto, Ontario

Larry Pagenick

Chartered Accountant

THE UNIVERSITY OF TORONTO ENGINEERING SOCIETY

BALANCE SHEET

AS AT FEBRUARY 28, 1983

	1983			1982 (Note 6)		
	Society	Store	Total	Society	Store	Total
CURRENT ASSETS						
Cash	21,990	33,459	55,449	16,897	39,457	56,354
Accounts receivable	40,155	306	40,461	35,078	451	35,529
Inventory	-	67,717	67,717	-	77,068	77,068
Prepaid expenses	83	92	175	229	1,130	1,359
	62,228	101,574	163,802	52,204	118,106	170,310
INVESTMENTS (Note 2)	13,167	-	13,167	5,619	-	5,619
FIXED ASSETS						
Office furniture and equipment - net (Accumulated depreciation: 1983 - \$8,191; 1982 - \$7,234)	2,125	2,714	4,839	2,657	1,444	4,101
	\$77,520	\$104,288	\$181,808	\$60,480	\$119,550	\$180,030
	-----	-----	-----	-----	-----	-----
LIABILITIES AND SURPLUS						
CURRENT LIABILITIES						
Accounts payable and accrued liabilities	52,228	29,673	81,901	38,798	54,360	93,158
GRADUATION BALL (Note 3)	10,748	-	10,748	6,200	-	6,200
ACCUMULATED SURPLUS	14,544	74,615	89,159	15,482	65,190	80,672
	\$77,520	\$104,288	\$181,808	\$60,480	\$119,550	\$180,030
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The accompanying notes are an integral
part of these statements.

TNE UNIVERSITY OF TORONTO ENGINEERING SOCIETY

STATEMENT OF ACCUMULATED SURPLUS

FOR THE YEAR ENDED FEBRUARY 28, 1983

	<u>1983</u>	<u>1982</u> (Note 6)
Balance, beginning of year	80,672	66,020
Net income for the year	<u>8,487</u>	<u>14,652</u>
Balance, end of year	<u>\$89,159</u>	<u>\$80,672</u>

STATEMENT OF INCOME

FOR THE YEAR ENDED FEBRUARY 28, 1983

	<u>1983</u>	<u>1982</u> (Note 6)
<u>REVENUES</u>		
Fees	42,148	59,048
Interest on investment	527	658
Pinball income	843	2,036
Locker income	<u>2,025</u>	<u>2,050</u>
	45,543	63,792
Net income - store	<u>9,424</u>	<u>11,012</u>
	<u>54,967</u>	<u>74,804</u>
<u>EXPENSES</u>		
General (Schedule A)	20,317	22,813
Committee costs (Schedule 8)	<u>26,163</u>	<u>37,339</u>
	<u>46,480</u>	<u>60,152</u>
<u>NET INCOME FOR THE YEAR</u>	<u>\$ 9,487</u>	<u>\$14,652</u>

STATEMENT OF STORE SECTION INCOME

FOR THE YEAR ENDED FEBRUARY 28, 1983

	<u>1983</u>			<u>1982</u> <u>TOTAL</u> (Note 6)
	<u>STORE</u>	<u>PHOTOCOPY</u>	<u>TOTAL</u>	
<u>SALES</u>	<u>218,430</u>	<u>4,546</u>	<u>222,976</u>	<u>228,981</u>
<u>COST OF SALES</u>				
Inventory, beginning of year	77,060	-	77,068	60,594
Purchases (including photocopy rental)	<u>173,122</u>	<u>2,019</u>	<u>175,141</u>	<u>214,487</u>
	250,190	2,019	252,209	275,081
Inventory, end of year	<u>67,717</u>	<u>-</u>	<u>67,717</u>	<u>77,068</u>
	<u>182,473</u>	<u>2,019</u>	<u>184,492</u>	<u>198,013</u>
<u>GROSS MARGIN</u>	<u>35,957</u>	<u>2,527</u>	<u>38,484</u>	<u>30,968</u>
<u>EXPENSES</u>				
Store salaries and employee benefits	20,476		14,866	
Photocopy service and supplies	3,060		1,719	
Office and general	1,954		1,544	
Professional fees	1,000		1,000	
Insurance	849		740	
Advertising	687		212	
Telephone	623		163	
Depreciation - office equipment	336		-	
Bad debts	<u>280</u>		<u>191</u>	
	<u>29,265</u>		<u>20,435</u>	
<u>OTHER INCOME</u>	<u>205</u>		<u>479</u>	
<u>NET INCOME FOR THE YEAR</u>	<u>\$ 9,424</u>		<u>\$11,012</u>	

The accompanying notes are an integral part of these statements.

SCHEDULE A

SCHEDULE OF GENERAL EXPENSES

FOR THE YEAR ENDED FEBRUARY 28, 1983

	<u>1983</u>	<u>1982</u> (Note 6)
Bad debts	-	140
Depreciation - office furniture and equipment	531	596
Executive	606	460
Gifts, donations and awards	1,538	1,778
Insurance	174	177
Interest and bank charges	336	278
Professional fees	1,700	5,552
Miscellaneous	200	555
Office salary and employee benefits	11,378	9,581
Postage	150	128
Printing and stationery	1,700	1,789
Repairs and alterations	491	395
Telephone	1,513	1,384
	<u>\$20,317</u>	<u>\$22,813</u>

SCHEDULE B

SCHEDULE OF COMMITTEE COSTS

FOR THE YEAR ENDED FEBRUARY 28, 1983

	<u>1983</u>	<u>1982</u> (Note 6)
<u>COMMUNICATIONS</u>		
Handbook	1,261	1,470
Yearbook	2,373	(3,726)
Toke Oika	2,032	3,915
Cannon paper	3,532	591
Calendar	966	489
Darkroom	486	657
Publication	<u>345</u>	<u>-</u>
	<u>10,995</u>	<u>3,396</u>
<u>SOCIAL</u>		
General	1,335	-
Cannon Ball	2,120	1,669
Cer rally	15	33
Oktoberfest	<u>(416)</u>	<u>3,180</u>
	<u>3,054</u>	<u>4,882</u>
<u>AFFILIATES</u>		
Engineering Athletic Association	1,386	17,453
Club grants	<u>2,754</u>	<u>2,351</u>
	<u>4,140</u>	<u>19,804</u>
<u>BLUE AND GOLD</u>		
LGM8	241	579
Blue and Gold general	1,219	210
Godive week	158	-
Homecoming	<u>320</u>	<u>598</u>
	<u>1,938</u>	<u>1,387</u>
<u>FOURTH YEAR</u>		
Graduation Ball	2,910	5,735
Kipling Ritual	<u>2,665</u>	<u>1,808</u>
	<u>5,575</u>	<u>7,543</u>
<u>PROFESSIONAL DEVELOPMENT</u>		
General	258	335
Engineering congress	521	-
APCO	115	-
Regional conference	<u>293</u>	<u>-</u>
	<u>1,187</u>	<u>335</u>
<u>GENERAL</u>		
Pub	(2,421)	-
High School Liaison	(207)	-
Women in Engineering	502	(250)
First year	43	6
Skula Nita	329	229
Special projects	407	-
OEDC	621	-
Other	<u>-</u>	<u>7</u>
	<u>(726)</u>	<u>(8)</u>
<u>TOTAL</u>	<u>\$26,163</u>	<u>\$37,339</u>

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THE UNIVERSITY OF TORONTO ENGINEERING SOCIETY

NOTES TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED FEBRUARY 28, 1983

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES

CASH:

Cash does not include amounts held on deposit for committee activities and affiliated clubs. These deposits are charged to committee expenses at the time the monies are advanced by Society.

INVENTORY:

Inventory is valued at the lower of cost (as determined on a first-in, first-out basis) and net realizable value.

INVESTMENTS:

The investments are recorded at cost. It is the Society's practice not to write down the carrying value of the investments to market as it intends to hold the investments until maturity.

FIXED ASSETS:

Office furniture and equipment is recorded at cost. This cost is being depreciated over the estimated useful lives of the assets on a declining balance basis at 20% per year.

STATEMENT OF INCOME:

The statement of income includes the revenues and expenses for all of the activities for the school year.

There are some activities and related expenditures that take place subsequent to the year end for which the Executive Council of the Society has approved.

The recognition of these expenses in the current accounting period is appropriate in that the elected Executive Council takes office mid March and is responsible for the expenditures for which they have budgeted for the following school year.

2. INVESTMENTS

The investments consist of the following:

	1983	1982
Guaranteed Investment Certificates:		
i) Due August 18, 1983, 18.25%	3,200	3,200
ii) Due October 21, 1983, 13%	3,245	-
iii) Due October 21, 1983, 13%	3,125	-
	9,570	3,200
Interest accrued	1,178	-
Total	10,748	3,200
Ontario Hydro Bond, 9%, due February 1, 1995 (Market value: 1983- \$2,057; 1982-\$1563)	2,419	2,419
Total investments	\$13,167	\$5,619

3. GRADUATION BALL

Each year, a portion of the orientation fees is appropriated for the graduation ball. As at February 28, 1983, the amounts appropriated are set out as follows:

Graduating Class	Amount Appropriated
1984	3,200
1985	3,245
1986	3,125
	29,570

NOTE: The Society has purchased Guaranteed Investment Certificates totalling \$9,570 with various maturity dates as detailed in Note 2. These investments will be renewed until the funds are required to pay for graduation ball expenses for that particular graduating class.

4. COMPARATIVE FIGURES

Certain figures of the prior period have been reclassified to conform with the presentation adopted in the current year.

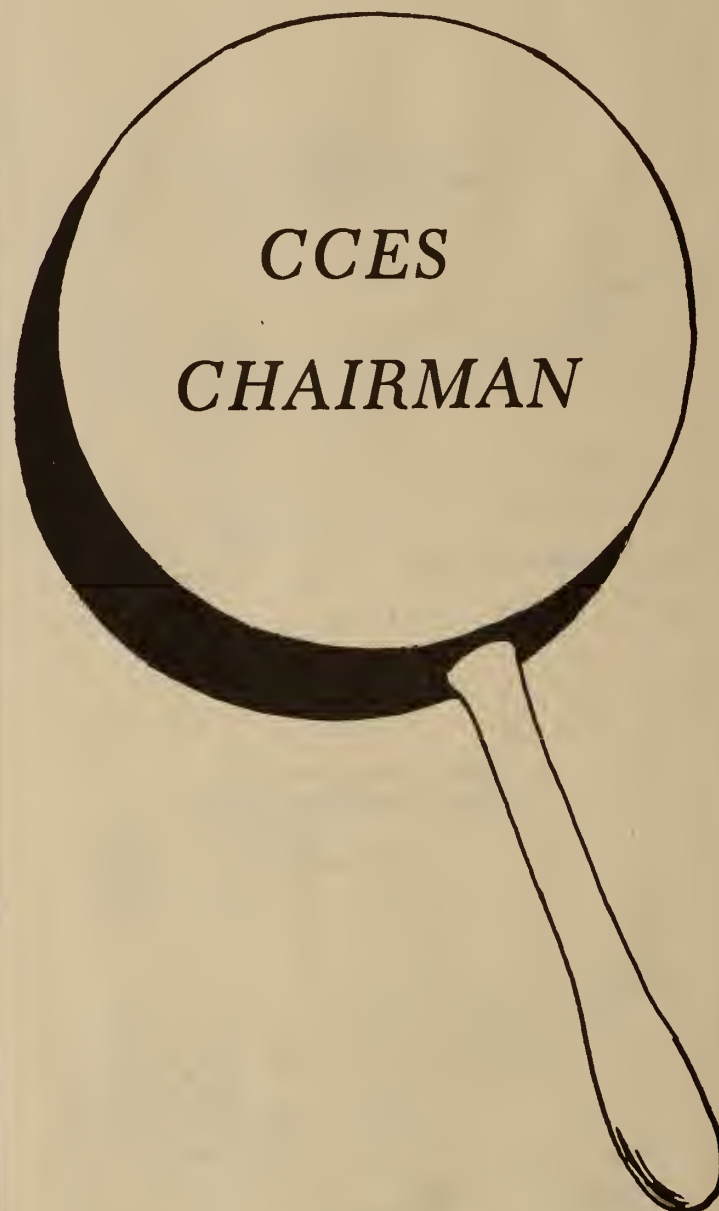
5. INCORPORATION

On March 1, 1982 all of the assets and liabilities of the unincorporated association known as the University of Toronto Engineering Society were transferred to a corporation without share capital. The corporation was incorporated under The Ontario Corporations Act September 17, 1981. The Corporation conducts its operations using the name - The University of Toronto Engineering Society.

6. CHANGE OF YEAR-END

The University of Toronto Engineering Society changed its year end from March 31 to February 28, effective February 28, 1982. The comparative figures for 1982 represent an eleven month period.

WANTED: The Engineering Society desperately needs one, garden variety



to plan the Congress of Canadian Engineering Students (CCES) conference to be held at U of T in 1985 to celebrate the Centennial of the Society

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In Memory of Vince Volpe

On July 25, 1983, Vince Volpe died as the result of a mountain climbing accident. Vince's death brought to an abrupt end his presidency of the 1983 graduating class.

Vince was a member of the Civil 8T3 class. His involvement with student groups started in high school where he served for four years on student council culminating in his being elected President. In this faculty, Vince was very active with the Civil Club and the Engineering Society. In March of 1981 he was elected to the Engineering Society executive committee as chairman of the Professional Development Committee. In this capacity he ran one of the Society's most successful speaker series ever. In March of

1982 he was elected Vice-President Administration of the Engineering Society. He was also very active in this position, including work in monitoring the \$100 incidental fee, running the 1983 elections and controlling the Engineering Stores and the Society finances.

In the spring of this year Vince was elected President of the 1983 graduating class. He will probably be best remembered however for his successful efforts to secure a Civil and Electrical common room.

Lord Byron once said, "The days of our youth are the days of our glory." It is tragic that Vince died while still having the potential for many more days of glory.

Meeting Dates

September is one busy month for meetings. First, the Eng Soc Executive Committee meets on Tues., Sept. 13. The

Annual General Meeting of the Engineering Society is scheduled for Tues., Sept. 27 at 5:00 pm in GB202. Every student has a vote at this meeting so don't miss the chance to express your opinions. The agenda for that date will be:

- 1) Adoption of Bylaw Changes
- 2) Adoption of Financial Statements
- 3) Appointment of Auditors
- 4) Questions from Members

There will be a full Council meeting in the same location immediately following the Annual General Meeting.

Class Elections

Elections for all first and second year classes will be held during the week of Sept. 19-23. Each class will elect one Engineering Society and one Faculty Council representative at this time.

Meeting, What Meeting?

Annual General Meeting of the Engineering Society

**Sept. 27
5:00 pm
GB202**

Don't Miss It!

Attention: Designers

HUMAN POWERED VEHICLE DESIGN MEETING

**Mon., Sept. 12
5:00 pm
WB143**



Engineering Athletics

Be a Sport

Michelle Bolhuis
E.A.A. Publicity Director

O.K. you Eng Jocks, by now you have probably gotten through all that registration red tape at Galbraith, survived lunch at SF, and maybe even found your favorite chair at Robarts. Great stuff after an easy summer in the sun, eh?!! Now it is time to get reacquainted with a couple of those other interesting, FUN buildings on campus!!!

This is referring, of course, to the fun that comes with participating in athletic activities found at the Athletic Centre and at Hart House. Starting this fall are women's basketball, field hockey, ice hockey, inner-tube waterpolo, soccer and touch football. For the guys there are basketball, football (touch and tackle), hockey, lacrosse, rugby, soccer, squash and volleyball teams. Everyone interested is encouraged to sign up for the track and field meet Friday, September 30 and the tennis tournament coming this month! Sign-up sheets and information for all the fall sports will be posted in the Engineering Society.

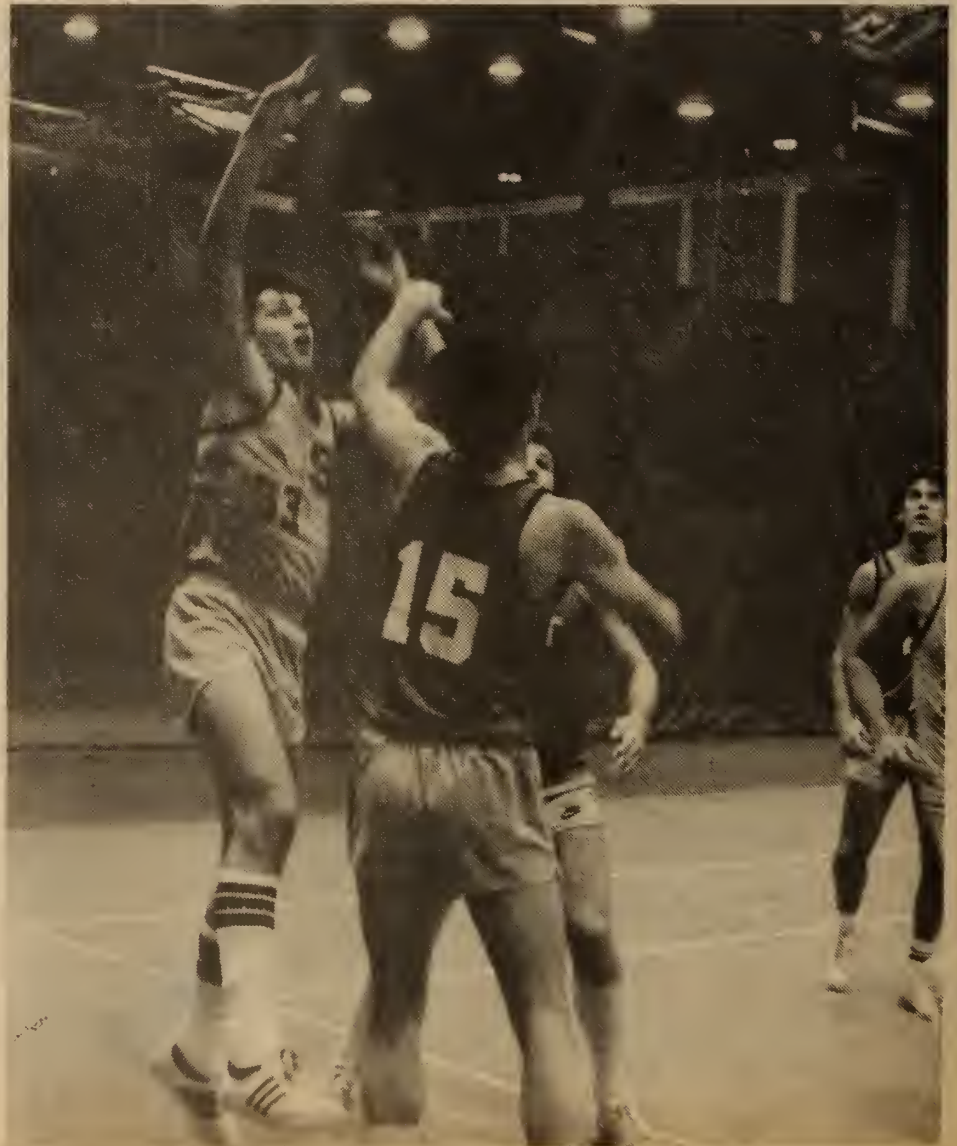
Remember to start working out for the first SPORTS PUB Thurs., Sept. 8 at 5:00 pm in the SF cafeteria. Not only will there be lots of exhilarating beer drinking but it will also be a great opportunity to meet all the E.A.A. sports commissioners and sign up for all those Eng Sports this fall.

Frosh keep in mind that you can participate in almost any sport under the sun; you don't have to be an Olympic destined athlete. The fall Inter-

faculty sports listed above cover a variety of skill levels. If you can tear yourself away from your TI55 for an evening or two (or three,...) you'll find lots of social interaction and enjoyment in the co-ed sports. Badminton, basketball, broom-ball capers, curling, innertube waterpolo, superstars and volleyball co-ed intramurals are open to all Athletic Centre members including frosh (you belong - you paid for it in your fees). Don't forget your frosh sheets in the Engineering Society or at the Sports Pub!

All those outstanding Eng Jocks of years past who "forgot" to claim their awards can receive their honours in the Athletic office.

The Athletic Office is located, along with the Engineering Society, in the southeast corner of the basement of the SF building (Room B670A). Someone is almost always around to answer any general questions that you might have. More specific questions can be directed to any of the following E.A.A. Executive members:





President
Judith Vosko
Eng Sci 8T4

Secretary-Treasurer
OPEN

Men's Athletic Director
Glyn Jones
Chem 8T4

Women's Athletic Director
Betty Dolinar
Geo 8T5

Director of Tournaments
Paul Hamel
Mech 8T6

Publicity Director
Michelle Bolhuis
Geo 8T5

Men's Aquatic Commissioner
OPEN

Women's Aquatics Commissioner
Carolyn Fraser
Mech 8T4

Men's Basketball Commissioner
Wayne Rantala
Elec 8T5

Women's Basketball Commissioner
Kathy Underhill
Chem 8T5

Men's Football Commissioner
Gary Cameron
Ind 8T5

Women's Football Commissioner
Teri Morrison
Geo 8T5

Men's Hockey Commissioner
Kevin Towers
Ind 8T5

Women's Hockey Commissioner
Dawn Demetrick
Civ 8T5

Men's Lacrosse Commissioner
Paul Blom
Mech 8T4

Women's Soccer Commissioner
Barb Smith
Grad - Chem

Men's Rugger Commissioner
Peter Watler
Chem 8T4

Women's Squash Commissioner
Angela Facey
Chem 8T4

Men's Soccer Commissioner
Glenn Pringle
Grad - Chem

Women's Volleyball Commissioner
Shanaugh McParland
Ind 8T6

Men's Squash Commissioner
Joe Chiang
Elec 8T4

Skiing Commissioner
Eugene Trusler
Grad - MMS

Men's Volleyball Commissioner
Mun Yim
Chem 8T5

Co-ed Sports Commissioner
Heather Young
Civ 8T5

continued from page 5

vacuum formed plastic aerodynamic uppersection. The monocoque body integrated the aerodynamic shell and the load bearing frame into one unit, saving both weight and space. The 1mm thick graphite body which supports the entire weight is the same material used in racing cars and high speed aircraft.

To reduce the rolling resistance the new vehicle will have the same wheel configuration as the original car, but the front wheels will be solid tire, wheelchair racing wheels to reduce bending of the axles. The rear drive wheel will have one of the new light-weight high pressure clincher tires.

To maximize engine efficiency the requisite 109cc. Briggs and Stratton 'lawnmower type' engine will have many custom built parts added. Twin overhead valves and spark plugs will be accommodated in a custom built cylinder head. The shock carburetor will be replaced with a Honda 50cc. moped engine carburetor to allow for more precise air-fuel mixtures. An electric starter will be added as will an electronic ignition system. The cylinder itself will be milled down and the compression ratio will be increased to further save fuel.

The goal for next year is to double the mileage achieved this year and attain over 1000 m.p.g. Many hours have been spent on the design of the new vehicle and many more hours will be spent on the construction of the vehicle, now well underway. If you are interested in helping to build the vehicle, meetings will be announced in October.

BIBLIOGRAPHY: Bourne, B.C. DESIGN AND CONSTRUCTION OF A FUEL EFFICIENT VEHICLE FOR ENTRY IN THE SHELL FUELATHON COMPETITION, Cockburn Centre for Engineering Design, Toronto, 1981

ar·ma·dil·lo \,är-mə-'dīl-(),ō \ n, pl **armadillos**
[Sp, fr. dim. of *armado* armed one, fr. L. *armatus*] :
any of several burrowing chiefly nocturnal edentate
mammals (family Dasypodidae) of warm parts of the
Americas having body and head encased in an armor
of small bony plates in which many of them can curl
up into a ball when attacked

(a Synonym for a popular Canadian beer.)

